

Amendments to the Claims

The current listing of the claims replaces all previous amendments and listings of the claims.

1. (Currently Amended) A plasma processing apparatus comprising:
a vacuum chamber accommodating therein a substrate to be processed, allowing an inner space of the vacuum chamber to be maintained at a vacuum level;
a first electrode fixedly disposed at a location in the vacuum chamber;
a second electrode installed in the vacuum chamber and facing the first electrode, the second electrode being vertically movable so as to vary a distance between the first electrode and the second electrode;
a driving mechanism for vertically moving the second electrode, the driving mechanism being installed outside the vacuum chamber;
a bellows unit for ~~air-tightly~~ air tightly sealing an opening, the bellows unit having a ~~frame-shaped~~ an upper bellows portion, a lower bellows portion, and a ring member connected to the driving mechanism, wherein the opening, through which the second electrode is driven by the driving mechanism from the outside of the vacuum chamber, is provided at the vacuum chamber, and the ring member is disposed between the upper bellows portion and the lower bellows portion;
an electrode supporting member for connecting the ~~frame-shaped~~ ring member to the second electrode, the electrode supporting member being installed in the vacuum chamber;
and
a high frequency power source generating plasma by supplying a high frequency power between the first electrode and the second electrode.

2. (Original) The plasma processing apparatus of claim 1, wherein the first electrode and the second electrode are a lower electrode and an upper electrode, respectively.

3. (Original) The plasma processing apparatus of claim 2, wherein the upper electrode is supported from underneath the lower electrode.

4. (Original) The plasma processing apparatus of claim 3, wherein the electrode supporting member includes an exhaust ring for uniformly exhausting the vacuum chamber.

5. (Original) The plasma processing apparatus of claim 3, wherein the electrode supporting member includes a cylindrical member for protecting an inner wall of the vacuum chamber.

6. (Original) The plasma processing apparatus of claim 3, further comprising a substrate supporting member for supporting the substrate to be processed above the lower electrode, the substrate supporting member being vertically movable by the driving mechanism to pass through the lower electrode.

7. (New) The plasma processing apparatus of claim 1, wherein the inner space of the vacuum chamber maintained in vacuum remains constant while the distance between the first electrode and the second electrode is varied.

8. (New) The plasma processing apparatus of claim 1, wherein the upper bellows portion and the lower bellows portion are oppositely extended and contracted in accordance

with a vertical movement of the ring member while maintaining a constant total length of the bellows unit.

9. (New) A vacuum processing apparatus comprising:

a vacuum chamber accommodating therein a substrate to be processed, allowing an inner space of the vacuum chamber to be maintained at a vacuum level;

a first structure fixedly disposed at a location in the vacuum chamber;

a second structure installed in the vacuum chamber and facing the first structure, the second structure being vertically movable so as to vary a distance between the first structure and the second structure;

a driving mechanism for vertically moving the second structure, the driving mechanism being installed outside the vacuum chamber;

a bellows unit for airtightly sealing an opening, the bellows unit having an upper bellows portion, a lower bellows portion, and a ring member connected to the driving mechanism, wherein the opening, through which the second structure is driven by the driving mechanism from the outside of the vacuum chamber, is provided at the vacuum chamber, and the ring member is disposed between the upper bellows portion and the lower bellows portion; and

a structure supporting member for connecting the ring member to the second structure, the structure supporting member being installed in the vacuum chamber.

10. (New) The vacuum processing apparatus of claim 9, wherein the first structure and the second structure are a lower electrode and an upper electrode, respectively.

11. (New) The vacuum processing apparatus of claim 10, wherein the upper electrode is supported from underneath the lower electrode.

12. (New) The vacuum processing apparatus of claim 11, wherein the structure supporting member includes an exhaust ring for uniformly exhausting the vacuum chamber.

13. (New) The vacuum processing apparatus of claim 11, wherein the structure supporting member includes a cylindrical member for protecting an inner wall of the vacuum chamber.

14. (New) The vacuum processing apparatus of claim 11, further comprising a substrate supporting member for supporting the substrate to be processed above the lower electrode, the substrate supporting member being vertically movable by the driving mechanism to pass through the lower electrode.

15. (New) The vacuum processing apparatus of claim 9, wherein the inner space of the vacuum chamber maintained in vacuum remains constant while the distance between the first structure and the second structure is varied.

16. (New) The vacuum processing apparatus of claim 9, the upper bellows portion and the lower bellows portion are oppositely extended and contracted in accordance with a vertical movement of the ring member while maintaining a constant total length of the bellows unit.